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Survival in Lung Cancer

TO THE EDITOR: The report from Travis Air Force base (Reynolds RD, Greenberg BR, Hill R, and associates: Survival in lung cancer. West J Med 127:190-194, Sep 1977) describing survival in patients with bronchogenic carcinomas following primary diagnosis at their institution was of some interest. Lacking, however, are any specifics about the treatment given to their patient population. Nonetheless, a rather misleading general statement "Radiotherapy did not prolong survival" appears as the last sentence in their lead abstract.

Later, we learned that they actually studied only the effect of postoperative irradiation on a relatively small group of patients with stage II and III disease. It should be noted that their negative conclusions contradict the findings of Kirsch[1] and Green and co-workers[2] from two separate studies involving patients with positive regional nodes. Pattersons's often quoted study[3] showing no benefit from postoperative irradiation did not separately analyze the effect on patients with involved nodes.

The therapeutic decision most often challenging the oncologist and the referring physician involves the efficacy of radiation therapy in the better risk, asymptomatic patient, with inoperative or unresectable local-regional disease. The published results of Smart and Hilton,[4] Guttman,[5] and Aristizabal and Caldwell[6] all describe clearly beneficial effects of primary irradiation on survival in this type of selected patient with lung cancer. They report five-year survivals of 22 percent, 9 percent and 16 percent, respectively. Of note, in one surgical series in which 1,155 explored but unresected patients were followed, there were no five-year survivors.[8] The more frequently recognized Veterans Administration cooperative study, which showed only a very modest survival benefit from primary radiation therapy, is essentially noncontributory to this question because of inadequate technique by today's standards (a third received less than 4,000 rads tumor dose and 90 percent were treated with orthovoltage) and unfavorable patient population (20 percent actually died before the completion of radiation therapy). Despite their misleading conclusion as stated in their abstract "Radiotherapy did not prolong survival," there was actually no discussion of this most cogent issue in the report from Travis Air Force base.

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The Authors Reply:

TO THE EDITOR: Our study is obviously open to criticism regarding certain specifics concerning the analysis and management of lung cancer. We think that our statistical data regarding survival are reasonably accurate. The subdivision of stage III into stages III and IV appears to be justified. The two

components of the survival curves also seem to be valid observations that will be useful in the analysis of potential treatment programs.

The issue regarding the value of radiotherapy in lung cancer is indeed a hotly contested one. It would have been wise, on our part, to have omitted this from our analysis, since it does little to settle the issue. Retrospective studies such as these are undoubtedly filled with bias. We were careful in our conclusions since we recognized that such bias could have occurred compounded by the relatively small number of cases. Careful analysis of the published graphs shows that there may have actually been some advantage to the radiotherapy treated group depending on the interpretation desired. This advantage is relatively small and of no statistical significance.

The issue of the value of radiotherapy in lung cancer will not be resolved for several years. Nearly all proponents seem to agree that the relative merits are currently measured in weeks of survival rather than in years which would be required to make this issue worthy of the energy spent in debating it. We must stand on our data and regret that it may appear to be misleading to some. Additional prospective studies of this issue are needed to satisfactorily resolve it.[1] It may well be that the issue at hand is not one of local disease control, but that of the presence of micrometastasis at the time of the initial evaluation.

In the meantime, there is no valid reason to withhold radiotherapy as part of the standard treatment of lung cancer. The decision regarding such therapy will continue to be that of the individual treatment center. There is no doubt about the merits of initial tumor response to radiotherapy. The high failure rate may be due to any one of several factors. Physicians should be encouraged to continue to refer patients to large treatment centers for investigation and therapy. Likewise, treatment centers must continue their refinement of patient selection through accurate staging procedures, and improve and standardize therapy through prospective trials designed to take advantage of current knowledge and past experiences.

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Outpatient Cardiac Catheterization

TO THE EDITOR: Justifiable concern has been expressed in recent years over the rising cost of health care in general, and in particular over the cost involved in the nation's largest single health problem, coronary artery disease. Growing acceptance of coronary angiography has led to its widespread use as a procedure. Careful patient selection is of primary importance in eliminating the costs of unnecessary studies. In addition, attempts should be made to control the cost of the procedure itself by discouraging the rote retrieval of superfluous data during the routine study (that is, routine right heart catheterization, die curves and the like) and by avoiding costs of unnecessary hospital admissions at the time of study.

In this regard, we would like to mention our experience in carrying out elective outpatient cardiac catheterizations as an important contribution toward controlling the overall cost of the procedure. In reviewing approximately 5,000 elective cardiac catheterizations done at Daniel Freeman Memorial Hospital, it became apparent that late complications of cardiac catheterization are rare and can be predicted at the time of study.[1] Based on this experience, outpatient catheterization has been done by the brachial approach on 537 patients at Daniel Freeman Memorial Hospital over the past three years. Of these patients, 350 were outpatients whose physical condition was deemed stable by recent office evaluation. While 25 of these patients were admitted to the hospital following catheterization for observation (usually because of severe coronary artery disease found at catheterization), the remainder were observed for three hours following the procedure and subsequently allowed to return home. During this observation period they were